

REMARKS/ARGUMENTS

The applicant acknowledges, with thanks, the Office Action dated July 18, 2008. Examiner's withdrawal of the finality of the previous office action is noted with appreciation. Claims 1-22 were previously canceled. Claims 23 and 26 are amended herein and no new claims have been added. Accordingly, claims 23-28 are currently pending.

The Non-Art Matters

The disclosure was objected to in the Office Action of July 18, 2008 for an informality. The Examiner cited to the specification at page 2 wherein the expression "CMK" added by way of an earlier amendment should read, according to the Examiner, "CMY."

The applicant agrees and has above tendered an appropriate amendment to the specification. Accordingly, it is respectfully submitted that the disclosure has now been amended to correct the informality objected to by the Examiner.

Claims 23 and 26 were objected to in the Office Action of July 18, 2008 for informalities. In particular, the Examiner noted that "colors" on line 1 of claims 23 and 26 should be changed to "color" in each instance.

The applicant agrees and has above tendered an appropriate amendment to those claims. Accordingly, it is respectfully submitted that claims 23 and 26 are now in proper form and contain no informalities such as those previously objected to by the Examiner.

Claims 23-28 were rejected in the Office Action of July 18, 2008 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner took the position that each of these claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor had possession of the claimed invention.

For at least the following reasons, applicant respectfully submits that all of the subject matter recited in each of the pending claims is fully supported and described in the specification in such a way as to reasonably convey to one skilled in the art that the applicant had possession of the claimed invention.

With regard to claims 23 and 26, the Examiner took the position that the expression “receiving primary device link profile data” and the term “link profile data” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0007] of the application as published wherein link profile data and receiving primary device link profile data is described. In particular, as set out there, the embodiments of the invention contemplate using a transformation table wherein standard rendering is used for colors inside the gamut, and colors outside the gamut are mapped to a placement of desired printer primaries. The relationship is established by experimentally determining the desired relationship between an input primary and an output primary and mapping the input primary to the desired output primary. Then an output of gamut primary is mapped to a placement of desired printer primaries. The mappings may then be used to create a transformation table.

Thus, in claims 23 and 26, the link profile data corresponding to a relationship between an input color space having an associated input gamut and an output color space having an associated output gamut is well supported in the specification as originally filed.

Further with regard to claims 23 and 26, the Examiner took the position that the expression “plurality of vertex values, each value having a value associated with a corresponding primary color of the color spaces” and the term “plurality of vertex values” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0019] of the application as published wherein it is described that one aspect of the embodiments of the present invention establishes a relationship within a printer (B2Ax) profile that anticipates the input (A2Bx) profile and provides a mapping in an optimal manner. For example, the typical printer cannot print red 255,0,0 but instead must use a combination of magenta and yellow. However, the appropriate combination of magenta and yellow is dependent upon the output device. The desired mapping is used to create an output ICC profile (B2Ax) mapping that includes mappings for colors out of the gamut. It is respectfully submitted that “255,0,0” is an example of one of the plurality of vertex values.

Thus, in claims 23 and 26, the receiving device link profile data including a plurality of vertex values is well supported in the specification as originally filed.

Further with regard to claims 23 and 26, the Examiner took the position that the expression “receiving comparison data corresponding to a rendered image” and the term “comparison data” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0022] of the application as published wherein it is described that display primaries (RGB) are known for any input profile. This is tag information and can be easily calculated. The mapping strategy of input to printer can be experimentally determined and specified for any specific printer and mode (perceptual, saturation, colorimetric). The relationship between display and printer primaries is therefore established and can be used to change the output ICC profile (B2Ax).

It is respectfully submitted that receiving comparison data corresponding to a rendered image is fully supported in the specification.

Further with regard to claims 23 and 26, the Examiner took the position that the expression “the comparison data including result values corresponding with a rendered image relative to the selected primary device link profile data” and the term “result values” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraphs [0007] and [0022] of the application as published wherein it is described that embodiments of the invention contemplate using a transformation table wherein standard rendering is used for colors inside the gamut, and colors outside the gamut or mapped to a placement of desired printer primaries. The relationship is established by experimentally determining the desired relationship between an input primary and an output primary and mapping the input primary to the desired output primary. Then an output of gamut primary is mapped to a placement of desired printer primaries. The mappings may then be used to create a transformation table. Display primaries (RGB) are known for any input profile. This is tag information and can be easily calculated. The mapping strategy of input to printer can be experimentally determined and specified for any specific printer and mode (perceptual, saturation, colorimetric). The relationship between display and printer primaries are therefore established and can be used to change the output ICC profile (B2Ax).

It is respectfully submitted that result values are a natural consequences of experimentally determining desired relationships between input primaries and output primaries and mapping selected input primaries to the desired output primaries.

Further with regard to claims 23 and 26, the Examiner took the position that the expression “generating modified device like profile data in accordance with received comparison data” and the expression “in accordance with received comparison data” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0007] of the application as published wherein it is described that embodiments of the invention may use a transformation table wherein standard rendering is used for colors inside the gamut, and colors outside the gamut are mapped to a placement of desired printer primaries. The relationship is established by experimentally determining the desired relationship between an input primary and an output primary and mapping the input primary to the desired output primary. Then an output of gamut primary is mapped to a placement of desired printer primaries. The mappings may then be used to create a transformation table.

Thus, in claims 23 and 26, the device link profile data may be modified by the experimentally determined relationships described above to generate modified device link profile data. This is well supported in the specification as originally filed.

Further with regard to claims 23 and 26, the Examiner took the position that the expression “storing modified device link profile data for use in accordance with subsequent conversions of image data between the input color space and the output color space” and the expression “storing modified device link profile data” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0009] and Figures 2 and 3 of the application as published wherein it is described that another aspect of the embodiments of the invention may use a plurality of transformation tables wherein each transformation table is mapped to an image input profile. This enables the image output device to support a plurality of image input profiles. Then when the image output device receives an image, the proper profile for the image input is determined and the appropriate transformation table is selected for converting the input image.

It is respectfully submitted that device link profile data and modified device link profile data may be stored in the lookup table 204 of Figure 2 and/or in the tables 306a-306c of Figure 3.

Next, with regard to claims 24 and 27, the Examiner took the position that the expression “generating comparison data in accordance with the rendered image and received tag data” and the term “comparison data” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0022] of the application as published wherein it is described that display primaries (RGB) are known for any input profile. This is tag information and can be easily calculated. The mapping strategy of input to printer can be experimentally determined and specified for any specific printer and mode (perceptual, saturation, colorimetric). The relationship between display and printer primaries are therefore established and can be used to change the output ICC profile (B2Ax). It is respectfully submitted, therefore, that generating comparison data and received tag data are fully supported in the specification.

Next, with regard to claims 25 and 28, the Examiner took the position that the expression “generating comparison data in accordance with received selection data” and the term “comparison data” were not disclosed in the original specification.

Applicant respectfully disagrees and directs the Examiner’s attention to the specification at least at paragraph [0022] of the application as published wherein, as noted above, fully supports generating comparison data in accordance with received selection data as would be understood by one skilled in the art.

Applicant respectfully submits, therefore, that all of the subject matter recited in each of the pending claims is fully supported and described in the specification in such a way as to reasonably convey to one skilled in the art that the applicant had possession of the claimed invention.

The Art Matters

Claims 23 and 26 were rejected in the Office Action of July 18, 2008 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,781,716 to Yoda (*hereinafter, “Yoda”*) in view of U.S. Patent Application Publication No. 2003/0214661 to Kondo (*hereinafter, “Kondo”*). Claims 24 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yoda in view of Kondo and further in view of U.S. Patent No. 6,967,746 to Walker et al.

(*hereinafter*, “Walker”). Claims 25 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yoda in view of Kondo, further in view of Walker, and further in view of U.S. Patent Application Publication No. 2002/0149786 to Hudson et al. (*hereinafter*, “Hudson”).

In view of the amendments, remarks, and arguments set forth herein, it is respectfully submitted that all pending claims are novel, patentably distinct, and unobvious over the art of record, when taken alone or in combination.

The Examiner took the position with regard to independent claims 23 and 26 on pages 8-10 of the Office Action that Yoda discloses many of the elements recited in those claims including, for example with regard to claim 23, that Yoda teaches means adapted for receiving primary device link profile data, means adapted for converting input color image data encoded in the input color space to output color image data in accordance with application of the primary device link profile data, and means adapted for receiving comparison data corresponding to a rendered image.

Applicant disagrees that Yoda teaches or fairly discloses these features.

However, the Examiner conceded on page 10 that Yoda does not disclose “means adapted for generating modified device like profile data in accordance with received comparison data” or “means adapted for storing modified device link profile data for use in accordance with subsequent conversions of image data between the input color space and the output color space.

For these conceded deficiencies in Yoda, the Examiner turned to the alleged teachings of Kondo wherein, according to the Examiner, Kondo discloses on page 7, at paragraph [0100] means adapted for generating modified device like profile data in accordance with received comparison data, and, on page 4 at paragraph [0065], means adapted for storing modified device link profile data for use in accordance with subsequent conversion s of image data between the input color space and the output color space.

Applicant disagrees that Yoda teaches or fairly discloses these features. Further, applicant respectfully submits that the combination of Kondo into Yoda is improper and, even if those teachings were to be combined in a manner as suggested by the Examiner based on his understanding of the pending claims in this application, they would not function in a way as recite din the claims.

In particular, the color space conversion system of the independent claims of the instant application include means adapted for receiving comparison data corresponding to a rendered

image, and means adapted for generating modified device link data in accordance with the received comparison data. That is, the means for generating the modified device link data, generates the modified device link data based on or in accordance with the comparison data.

However, the Examiner cited to column 19, lines 33-46 of Yoda for an alleged teaching of comparison data. However, this portion of Yoda does not at all teach, suggest, or fairly disclose comparison data. Rather, column 19, lines 33-46 of Yoda only discloses:

The conversion of color data by the data conversion section 320 is a conversion referring to the color conversion table for performing the color conversion peculiar to the present invention, and thus hue is not always preserved, but it is possible to obtain an output image which is less in muddiness and high in color quality. In the color conversion apparatus, it is preferable that there is provided such an arrangement that as one of the plurality of sorts of output profiles 343a, 343b, . . . , 343m stored in the definition storage section 340, the output profile associated with the image display unit 22 shown in FIGS. 2 and 3 is prepared beforehand, the image based on the color data after the conversion by the data conversion section 320 is displayed on the display screen 22a of the image display unit 22 (cf. FIG. 2).

On page 9 of the Office Action the Examiner equated the “color data” disclosed at column 19, lines 33-46 of Yoda as the comparison data recited in the independent claims of the present application. Applicant disagrees.

Although applicant does not concede that the color data disclosed in Yoda is equivalent to the comparison data recited in the independent claims of the present application, it is respectfully submitted that the color data of Yoda is not combinable with the teachings of Kondo as suggested by the Examiner, wherein, according to the Examiner, Kondo with Yoda teaches “means adapted for generating modified device link profile data in accordance with received comparison data.” By the Examiner’s reasoning, the color data of Yoda could be used by Kondo to generate modified device link profile data which is neither practical nor possible.

In particular, Kondo at page 7, paragraph [0100] cited by the Examiner only discloses:

When the device link profile 600 is corrected in accordance with a color difference between calorimetric values obtained through colorimetry of the color patches constituting the color chart 43 and calorimetric values obtained through colorimetry of the color patches constituting the color chart 64, it is possible to obtain the device link profile 600 enhanced in practical color matching with greater accuracy.

As can be seen, color data of the type described in Yoda is not at all useful or practical in the system of Kondo in a manner as suggested by the Examiner.

For at least the above reasons, applicant respectfully submits that each of independent claims 23 and 26 is novel, patentably distinct and unobvious over Yoda and Kondo, alone or in combination. Claims 24 and 25 depend from independent claim 24. Claims 27 and 28 depend from independent claim 26.

The teachings of Walker and Hudson do not cure the deficiencies of Yoda or Kondo or their combination. Walker only discloses a system for combining device color profiles wherein a pair of transforms are obtained including a source device to profile connection space transform and a destination device to profile connection space transform. These transforms are combined thereby producing a device to device transform. Thereafter, a file may be operated upon using the device to device transform, thereby forming a modified file, which may be outputted to a destination device.

It is respectfully submitted that Walker does not teach, suggest, or fairly disclose the features recited in the claims pending in the instant application including, for example means adapted for generating modified device link profile data in accordance with received comparison data; and means adapted for storing modified device link profile data for use in accordance with subsequent conversions of image data between the input color space and the output color space.

Hudson only discloses a document-to-printer color gamut matching system that enables comparison of at least two color maps in a manner that allows selection of the printer that will result in the best print output. Information related to the document to be printed and information describing the color gamut(s) that each available printer is capable of printing is compared. Each color gamut is evaluated to determine suitability for use with the document. The document-to-printer gamut matching system may provide the author of the document with a number of candidate printers best matched to the printing of the document depending on the rendering intent of the author; may select a printer based on a measurement of best fit; or may generate a custom color map to result in a color gamut that is satisfactory.

It is respectfully submitted that Hudson does not teach, suggest, or fairly disclose the features recited in the claims pending in the instant application including, for example means adapted for generating modified device link profile data in accordance with received comparison

data; and means adapted for storing modified device link profile data for use in accordance with subsequent conversions of image data between the input color space and the output color space.

For at least the above reasons, applicant respectfully submits that each of independent claims 23 and 26 is novel, patentably distinct and unobvious over all of the art of record taken alone or in combination. Claims 24 and 25 depend from independent claim 24. Claims 27 and 28 depend from independent claim 26.

In accordance with the afore-noted amendments and comments, it is submitted that all claims are patentably distinct over the art, and in condition for allowance thereover. An early allowance of all claims is respectfully requested.

If there are any fees necessitated by the foregoing communication, the Commissioner is hereby authorized to charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 66329/24817.

Respectfully submitted,

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Susan L. Mizer
Registration No. 38,245
TUCKER ELLIS & WEST LLP
1150 Huntington Bldg.
925 Euclid Ave.
Cleveland, Ohio 44115-1414
Customer No.: 23380
Tel.: (216) 696-3466
Fax: (216) 592-5009